

REMARKS

Claims 56 – 58 and 63 - 65 have been amended to more particularly point out and distinctly claim applicant's invention and to ensure that proper antecedent basis exists throughout the claims. New matter is not introduced by this amendment. Specifically, support for inclusion of the term "extending about substantially the entire periphery of the asset" in claim 56 is located on page 7, lines 4-7 of the instant specification.

Claims 56, 60-62, 66 and 67 stand rejected under 35 U.S.C. § 102 (e) as being anticipated by Tuttle (U.S. 6,097,301).

Tuttle discloses a method of adjusting the 2-way communication range of an RFID system to assist a human operator to individually handle and interrogate a plurality of tagged objects, such as suitcases, that each include an RFID tag transceiver. Tuttle discloses attaching an RFID tag 16 to each suitcase 12, preferably near a handle 18 of the suitcase. Such mounting enables an operator's hand to be as close as possible to the tag when the operator grasps the handle to pick up the suitcase. Although the tag 16 of Tuttle has an antenna 30, there is no disclosure in Tuttle of "an asset having ... an antenna electrically connected to said responding device and extending about substantially the entire periphery of the asset" as recited in claim 56 or of "a tubular" as recited in claim 62. It is well settled that an anticipatory reference under 35 U.S.C. §102 must identically disclose every claimed element of the anticipated invention. It is submitted that Tuttle does not identically disclose or describe a process as set forth in independent claims 56 and 62 as currently presented in the instant application. In view of the foregoing, it is submitted that the rejection of independent claims 56 and 62, and claims dependent

thereon, i.e. claims 60, 61, 66 and 67 under 35 U.S.C. §102 (e) as being anticipated by Tuttle is improper and should be withdrawn.

Claims 68 and 69 stand rejected under 35 U.S.C. § 102 (b) as being anticipated by Dailey et al. (U.S. 5,160,925).

Dailey et al. discloses a short hop communication link for downhole measurement-while-drilling system which includes a sensor that is positioned downhole from a motor. As illustrated in Figs. 3 and 6, the system comprises a bottom-hole assembly having a drill bit 50, a motor 100 with an extended sub 200 connected to the drill bit 50, a sensor antenna 25 located on the exterior of the sub 200, a sensor module 125 positioned inside the extended sub 200, a pulser collar 35 positioned uphole from the motor 100, a control module 40 located in a sub 45 near the pulser collar 35, a host module 10, a control antenna 27 mounted on the exterior of control sub 45, and a guard sub 70. A drill collar and the drill string connect the downhole assembly to the drilling rig according to conventional techniques.

Independent process claim 68 calls for "passing an asset having a responding device connected thereto within a transceiver having a generally annular antenna so as to permit communication between said transceiver and said responding device." The Examiner states in the last Office Action that "Dailey et al. discloses short hop communication for downhole MWD system, which includes passing an asset having a responding device [which could be a transponder or interrogator or sensor 80] connected thereto within a transceiver 45 having a generally annular [ring shaped] antenna 27" At column 8, lines 5 – 7, Dailey et al. mentions that sensor subs 80 may be included as required in the downhole system and further at column 17, lines 19 – 22 that the uphole end 97 of the transceiver sub 45 also preferably includes a pin connection for mating with a sensor sub 80. In other word, Dailey et al. teaches

that one end of the transceiver sub 45 is mated with one end of the sensor sub 80. It is submitted that Dailey et al. clearly discloses that the sensor sub 80 is fixed relative to the transceiver sub 45 and therefore could not be passed through the transceiver. It is well settled that an anticipatory reference under 35 U.S.C. §102 must identically disclose every claimed element of the anticipated invention. It is submitted that Dailey et al. does not identically disclose or describe a method as set forth in independent claim 68 as currently present in the instant application which requires "passing an asset having a responding device connected thereto within a transceiver". In view of the foregoing, it is submitted that the rejection of independent claim 68, and claim 69 which is dependent thereon, under 35 U.S.C. §102 (e) as being anticipated by Dailey et al. is improper and should be withdrawn.

Claims 57 – 59 and 63 – 65 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over Orban et al. (U.S. 5,354,956) in view of Tuttle (U.S. 6,097,301). Orban et al. discloses pulse echo apparatus and methods for measuring characteristics of a borehole while it is being drilled. Ultrasonic transceivers 45, 46 are secured in a drill collar 20 or 20' which is attached to the bottom of a drill string 6 so as to face the annulus 10 or borehole 9 (Figs. 1 and 1A). These transceivers are preferably mounted on stabilizer fins 27 of collar 20 or may be mounted in the cylindrical wall 23 of collar 20' as illustrated in Fig. 1A. Electronic circuits and microprocessors, memories, etc. used to control transceivers 45, 46 are mounted on a sleeve 21 which is secured within collar 20 or 20'. The sensor of the transceiver 45 is a piezo-electric disk 54 which is preferably a flat circular slice of ceramic material. The sensor stack, i.e. the ceramic disk 54, matching layer 56 and backing element 58, generates or emits an ultra-sonic pulse outwardly toward the

wall of borehole 9 through drilling mud of annulus 10 and receives sonic echo pulses which are reflected back to ceramic disk or sensor 54.

The Examiner states that "Orban et al. discloses ultrasonic measurement apparatus, which includes a tubular 21 ..., two transceivers 45, 46 located on the exterior of the asset and sensor 54 [which also is disclosed as a transceiver] passed through the interior of the asset [as shown in fig. #2A, 2B](col. 10, lines 25-67)." Ceramic sensor 54 is an integral part of transceiver 45, and as such, is secured in a drill collar 20, 20' in the manner as described above. The transceivers 45, 46 of Orban et al., and the sensors 54 which are a component part thereof, are not "passed" in relation to an asset having a responding device as called for in claims 57-59 and 63-65, but in fact are themselves fixed to the asset which is the drill collar. Further, there is no disclosure of an asset in Orban et al. having a responding device. The asset of Orban et al. may be considered the drill string, a portion of which, i.e. drill collar 20, 20', has transceivers 45, 46 secured thereto. These transceivers measure the echo of the sonic pulse from the formation wall of the borehole, not communication from a responding device.

The Examiner attempts to correct these deficiencies of Orban et al. by combining this reference with the teachings of Tuttle. As discussed above, Tuttle discloses a method of adjusting the 2-way communication range of an RFID system to assist a human operator to individually handle and interrogate a plurality of tagged objects, such as suitcases, that each include an RFID tag transceiver. Tuttle discloses attaching an RFID tag 16 to each suitcase 12, preferably near a handle 18 of the suitcase. Such mounting enables an operator's hand to be as close as possible to the tag when the operator grasps the handle to pick up the suitcase. Although the tag 16 of Tuttle has an antenna 30, there is no disclosure in Tuttle of

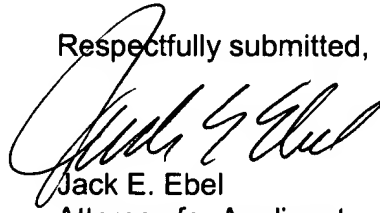
“an asset having ... an antenna electrically connected to said responding device and extending about substantially the entire periphery of the asset” as recited in claim 56 (from which rejected claims 57-59 depend from) or of “a tubular” as recited in claim 62 (from which claims 63-65 depend from). Further, it is submitted that a skilled artisan in possession of the disclosure of Orban et al. which pertains to the use of pulse echoes while drilling a subterranean well to determine borehole diameter would not look to Tuttle which discloses an RFID system for tracking baggage. Assuming arguendo that a skilled artisan would look to Tuttle to modify the apparatus or process of Orban et al., the artisan would not substitute the transceiver of Orban et al. with a responding device since to do so would destroy the express function of the transceivers 45, 46 of Orban to transmit a pulse toward the formation wall in the borehole and record the echo to determine the diameter of the borehole. For these reasons, it is submitted that the rejection of claims 57 – 59 and 63 – 65 under 35 U.S.C. § 103 (a) as being unpatentable over Orban et al. in view of Tuttle is improper and should be withdrawn.

Claims 70-72, 2-11, 14-16, 18, 19, 21-27, 30-36, 38-47 and 50-55 stand allowed. The Examiner's statement of reasons for the indication of allowable subject matter were previously commented on in applicant's Request for Reconsideration under 37 C.F.R § 1.111 dated May 7, 2004.

The citation of prior art made of record and not relied upon is acknowledged. However, a detailed discussion thereof is deemed unnecessary because the claims of the instant application were not rejected thereunder.

In view of the foregoing, Applicant respectfully request allowance of all claims remaining in the captioned application, i.e. claims 2-11, 14-16, 18, 19, 21-27, 30-36, 38-47 and 50-72.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Jack E. Ebel", is written over the typed name.

Jack E. Ebel
Attorney for Applicant
Reg. No. 28,148
(303) 239-9883